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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,101	07/11/2003	Joseph R. Byrum	MSUT:008US	3878
32425 7590 01/09/2007 FULBRIGHT & JAWORSKI L.L.P. 600 CONGRESS AVE. SUITE 2400 AUSTIN, TX 78701			EXAMINER ROBINSON, KEITH O NEAL	
			ART UNIT	PAPER NUMBER
			1638	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/09/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/618,101

Applicant(s)

BYRUM ET AL.

Examiner

Keith O. Robinson, Ph.D.

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 33-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/30/06 & 12/18/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. The amendments of claims 1, 8, 15, 30 and 32 and the withdrawal of claims 33-40, filed October 25, 2006, have been received and entered in full.
2. Claims 1-32 are under examination.
3. Claims 33-40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on March 9, 2006.
4. This application contains claims 33-40 drawn to an invention nonelected with traverse in the 'Response to Election/Restriction, filed March 9, 2006. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Information Disclosure Statement

5. The information disclosure statement filed November 30, 2006 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because there is no English translation for the cited reference. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based

on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Response to Arguments

6. Applicant's amendment of claim 8, see page 4 of 'Claim Amendment', filed October 25, 2006 has overcome the objection of claim 8 in the Office Action mailed May 5, 2006 (see page 3). The objection has been withdrawn.

7. Applicant's arguments regarding the 35 USC § 112, first paragraph rejection for lack of enablement due to lack of deposit for soybean variety SN30003 has been fully considered and found persuasive (see page 12, last three lines to page 13, first three lines of 'Remarks' filed October 25, 2006). The rejection has been withdrawn.

Claim Rejections - 35 USC § 112, first paragraph – Written Description

8. Claims 1-32 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The rejection is repeated for the reasons of record as set forth in the Office Action mailed May 5, 2006 (see pages 3-6). Applicant's arguments, filed October 25, 2006, have been fully considered but they are not persuasive.

Applicant argues that the amended claims relate to soybean varieties demonstrating agronomically elite characteristics, mean whole seed total protein of between 45-50%, mean whole seed total protein plus oil content of between 64-70%,

mean whole seed total oil content of at least 20% and commercially significant yield and that the meaning of these terms would be clear on their face to one of ordinary skill in the art (see page 10, last paragraph to page 11, end of 1st paragraph of 'Remarks' filed October 25, 2006).

This is not persuasive. The issue is not the definition of the terms, but the lack of written description regarding the broad genus of soybean plants with the claimed characteristics. As stated in the previous Office Action mailed May 5, 2006, this broad genus of plants is not described and the specification only provides adequate written description for soybean varieties 0007583, 0008079, 0137335, 0137472, 0137441 and 0137810 (see page 3, last two lines to page 4, end of 2nd full paragraph).

Applicant argues that the specification explicitly provides multiple examples demonstrating that Applicant was in possession of the subject matter at the time of filing (see page 11, 2nd paragraph to page 12, lines 1-2 of 'Remarks' filed October 25, 2006).

This is not persuasive. The specification provides evidence that Applicant was only in possession of soybean varieties 0007583, 0008079, 0137335, 0137472, 0137441 and 0137810 (see page 3, last two lines to page 4, end of 2nd full paragraph of the previous Office Action mailed May 5, 2006).

Applicant argues that based on the working examples, one of skill in the art could also generate new varieties using the same protocols described in the specification (see page 12, 1st full paragraph of 'Remarks' filed October 25, 2006).

This is not persuasive. It is known in the art that no two breeders can produce the exact same plant even if they start with the same starting material. In fact, the

specification states, "The varieties which are developed can be unpredictable. This unpredictability is because the breeder's selection occurs in unique environments, generally with no control at the DNA level (using conventional breeding procedures), and with millions of different possible genetic combinations being generated. A breeder of ordinary skill in the art cannot predict the final resulting lines he develops, except possibly in a very gross and general fashion. The same breeder cannot produce the same variety twice by using the exact same original parents and the same selection techniques" (see page 14, lines 18-24).

Claim Rejections - 35 USC § 112, first paragraph - Enablement

9. Claims 1-29 and 32 remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The rejection is repeated for the reasons of record as set forth in the Office Action mailed May 5, 2006 (see pages 8-11). Applicant's arguments, filed October 25, 2006, have been fully considered but they are not persuasive.

Applicant argues that the amended claims and the working examples disclosed in the specification in conjunction with the knowledge of one of ordinary skill in the art provides sufficient guidance to practice the invention without undue experimentation (see page 13, 2nd paragraph to page 15, end of 1st paragraph of 'Remarks' filed October 25, 2006).

This is not persuasive. As stated in the previous Office Action mailed May 5, 2006, the specification is not enabled for the broad genus of soybean plants having the claimed characteristics, but is enabling for soybean varieties 0007583, 0008079, 0137335, 0137472, 0137441 and 0137810 (see page 8, 1st full paragraph to page 9, lines 1-4). In addition, soybean varieties 0007583, 0008079, 0137335, 0137472, 0137441 and 0137810 have been deposited thus making them available to one skilled in the art. The broadly claimed soybean plants having the claimed characteristics would require undue trial and error experimentation because, as stated above, one skilled in the art cannot produce the same variety twice by using the exact same original parents and the same selection techniques.

Applicant argues that, for claims 10-14, the function of the locus is not relevant to the patentability of the claims and that one skilled in the art may analyze a soybean plant of claim 10 for its elite characteristics (see page 16, 1st paragraph of 'Remarks' filed October 25, 2006).

This is not persuasive. As there is no guidance regarding any single locus conversion in the specification, it would require undue trial and error experimentation for one skilled in the art to make and use the claimed invention because, as stated in the previous Office Action mailed May 5, 2006, it would require one skilled in the art to screen thousands of soybean plants to determine which, if any, had the claimed characteristics and to determine which single locus conversion would stably insert into the genome of the claimed invention (see page 9, 2nd and 3rd paragraphs).

Applicant argues that, for claims 15-18 and 23-32, undue trial and error experimentation is not required to produce and screen soybean plants to determine which possess the claimed characteristics (see page 16, 2nd paragraph of 'Remarks' filed October 25, 2006).

This is not persuasive. Without knowledge of the other soybean plant used in the cross to produce the claimed plants, it would require one skilled in the art undue trial and error experimentation to determine which soybean plants could be used in a cross with SN30003.

Claim Rejections - 35 USC § 102

10. Claims 1-14 and 16-29 remain rejected under 35 U.S.C. 102(b) as being anticipated by Cober et al (Crop Sci. 40: 39-42, 2000). The rejection is repeated for reasons of record as set forth in the Office Action mailed May 5, 2006 (see pages 11-12). Applicant's arguments, filed October 25, 2006, have been fully considered but they are not persuasive.

Applicant argues that the soybean plants disclosed by Cober et al distinct from the claimed soybean varieties in terms of oil content and agronomic characteristics based on the amended claims and the specification (see page 17, 2nd paragraph of 'Remarks' filed October 25, 2006).

This is not persuasive. Applicant has amended the claims wherein the claimed soybean now has a mean seed total oil content of at least 20%; however, it is known in the art that soybean plants are typically made up of at least 20% oil. For example, Poehlman et al (Breeding Soybean, *In* Breeding Field Crops 4th ed., pages 300-318,

1995) teach that soybean seed on average contain 40% protein and 20% oil (see page 300). Thus, the plants disclosed by Cober et al would inherently have at least 20% oil content. In addition, one skilled in the art would know how to make further selections to develop elite lines. In fact, Cober et al disclose that the soybean plants could be used to produce lines having high protein and high yield (see page 42, last paragraph). Therefore, the soybean plants disclosed by Cober et al are indistinguishable from the claimed soybean plants.

11. Claims 1-14 and 16-29 remain rejected under 35 U.S.C. 102(b) as being anticipated by Wilcox (Crop Sci. 38: 900, 1998). The rejection is repeated for reasons of record as set forth in the Office Action mailed May 5, 2006 (see pages 12-13). Applicant's arguments, filed October 25, 2006, have been fully considered but they are not persuasive.

Applicant argues that the soybean varieties disclosed by Wilcox do not display an oil content of at least 20% and does not describe agronomic characteristics such as disease resistance or nematode resistance (see page 17, last paragraph to page 18, lines 1-7 of 'Remarks' filed October 25, 2006).

This is not persuasive. As stated above, it is known in the art that soybean plants are typically made up of at least 20% oil. Thus, the plants disclosed by Wilcox would inherently have at least 20% oil content. Though the Wilcox reference does not disclose disease resistance or nematode resistance, the reference does disclose other agronomic traits such as lodging score (i.e. standability). Therefore, the soybean plants disclosed by Wilcox are indistinguishable from the claimed soybean plants.

Claim Rejections - 35 USC § 102/103

12. Claims 15-32 remain rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wilcox et al (Crop Sci. 35: 1036-1041, 1995). The rejection is repeated for reasons of record as set forth in the Office Action mailed May 5, 2006 (see pages 13-17). Applicant's arguments, filed October 25, 2006, have been fully considered but they are not persuasive.

Regarding claim 15, Applicant argues that the data provided by Wilcox et al indicate that simultaneous maintenance of yield, protein and oil content of each of the parental lines was not achieved in the reported progeny lines (see page 18, last paragraph to page 19, lines 1-3 of 'Remarks' filed October 25, 2006).

This is not persuasive. The data provided by Wilcox et al, as stated in the previous Office Action mailed May 5, 2006 teaches soybean varieties that are agronomically elite having protein content between 45% and 50%, a total protein plus oil content of between 64% and 70% and a commercially significant yield (see page 14, 2nd paragraph). Wilcox et al do not teach the use of SN30003, however, it would have been obvious to one of skill in the art to use the soybean varieties taught by Wilcox et al to develop soybean plants having the claimed characteristics (see page 15, 2nd and 3rd paragraphs of the previous Office Action mailed May 5, 2006).

Regarding claims 30-32, Applicant argues that the reference does not provide one of skill in the art with an expectation of success in attempting to create the claimed soybean varieties (see page 19, 1st full paragraph of 'Remarks' filed October 25, 2006).

This is not persuasive. As stated in the previous Office Action mailed May 5, 2006, one skilled in the art would have a reasonable expectation of success based on the success of Wilcox et al in producing agronomically elite soybean plants with high protein content (see page 15 4th paragraph). As stated above, it is known in the art that soybean plants are typically made up of at least 20% oil. Thus, the plants disclosed by Wilcox would inherently have at least 20% oil content.

Regarding claims 16-29, Applicant argues that Wilcox's teachings and any expectation of success in using them do not extend to the further step of maintaining or incorporating improved oil levels in a soybean cultivar (see page 19, 2nd full paragraph).

This is not persuasive. As stated in the previous Office Action mailed May 5, 2006, one skilled in the art would have a reasonable expectation of success based on the success of Wilcox et al in producing agronomically elite soybean plants with high protein content (see page 16, 3rd paragraph to page 17, lines 1-6). As stated above, it is known in the art that soybean plants are typically made up of at least 20% oil. Thus, the plants disclosed by Wilcox would inherently have at least 20% oil content.

Claim Rejections - 35 USC § 103

13. Claims 15 and 30-32 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Wilcox (Crop Sci. 38: 900, 1998). The rejection is repeated for reasons of record as set forth in the Office Action mailed May 5, 2006 (see pages 17-19). Applicant's arguments, filed October 25, 2006, have been fully considered but they are not persuasive.

Applicant argues that the references do not motivate one to attempt or arrive at the claimed plants except by hindsight (see page 20, 1st paragraph of 'Remarks' filed October 25, 2006).

This is not persuasive. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In addition, as stated in the previous Office Action mailed May 5, 2006, Wilcox teaches soybean plant C1944 and the specification teaches that soybean plant C1944 is soybean variety SN30003. Wilcox also teaches that the soybean plant C1944 has the claimed characteristics. Thus, one of ordinary skill in the art would understand that crosses could be made with the plant taught by Wilcox using methods taught by Conway to make and use the claimed invention. The teaching of Wilcox et al (1995 reference) were not used in the instant rejection and therefore, are not relevant.

Conclusion

14. No claims are allowed.
15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith O. Robinson, Ph.D. whose telephone number is 571-272-2918. The examiner can normally be reached on Monday - Friday 7:30 am - 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on (571) 272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

17. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

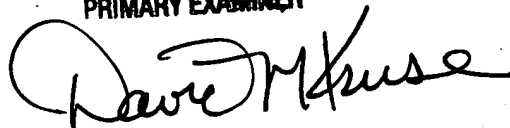
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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Keith O. Robinson, Ph.D.

January 3, 2007

DAVID H. KRUSE, PH.D.
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read "Dave H. Kruse", written over the printed name and title.